



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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D3179-041
Job Sheet 192937



Part No: D3179-041

Job Qty: 10 pcs

Part Name: Litter Tie Down (Non-Locking)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 4/4/19

Job Tracking No:

Due Date: 5/15/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV E IPP A1 03.01.09 Added Acid etch end alodine RF IPP Rev:B Added Powder Coat 07-07-04 JLM
IPP REV:C AS PER REV D JLM 13-05-24 VERIFIED BY:DD IPP Rev:C 08-12-10 add part list DD verified by:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Bandsaw - 1	6 pcs	5/15/19	5/15/19	0.00	0.50	Bandsaw - 1		gmm 14/06/05 ?
110	HAAS 4 Axis - B4B	6 pcs	5/15/19	5/15/19	0.37	10.91	HAAS - 1 - B4B		DAS 71
							HAAS - 2 - B4B		9-89
							HAAS - 3 - B4B		19-65
							HAAS - 4 - B4B		
120	QC 2	6 pcs	5/15/19	5/15/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		19-65
							QC 2 - 49		
							QC 2 - 50		DAS 71
							QC 2 - 51		9-89
							QC 2 - 52		
							QC 2 - 56		



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CANADA
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Container No: S188007



Part: D3179-041

Job No: 192937

Serial No/Batch: S188007

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 06/06/19

130 QC 8	6 pcs	5/15/19	0.00 0.00	QC 2 - 57	
				QC 2 - 62	
				QC 2 - 63	
				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 2 - 65	
				QC 2 - 5	
				QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
140 Handfinish - 1-1 Chemical-B4B	6 pcs	5/15/19	0.00 0.49	QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	B. 19-06-11
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
				QC 8 - 1 (A)	
				QC 8 - 47	
				QC 8 - 40	
				QC 8 - 52	
				QC 8 - 23	
				Handfinish - 1 - 1 - B4B	
				Handfinish - 1 - 2 - B4B	
				Handfinish - 1 - 3 - B4B	☆ JUN 11 2019
				Handfinish - 1 - 4 - B4B	
				Handfinish - 1 - 5 - B4B	
				Handfinish - 1 - 6 - B4B	
				Handfinish - 1 - 7 - B4B	
				Handfinish - 1 - 8 - B4B	
				Handfinish - 1 - 9 - B4B	
				Handfinish - 1 - 10 - B4B	
				Handfinish - 1 - 11 - B4B	
				Handfinish - 1 - 12 - B4B	
				Handfinish - 1 - 13 - B4B	
				Handfinish - 1 - 14 - B4B	
				Handfinish - 1 - 15 - B4B	

					Handfinish - 1 - 16 - B4B	
					Handfinish - 1 - 17 - B4B	
					Handfinish - 1 - 18 - B4B	
					Handfinish - 1 - 19 - B4B	
					Handfinish - 1 - 20 - B4B	
					Handfinish - 1 - 21 - B4B	
					Handfinish - 1 - 22 - B4B	
150 QC 7	6 pcs	5/15/19	0.00	0.00	QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	
					QC 7 - 15	
					QC 7 - 17	
					QC 7 - 18	
					QC 7 - 19	
					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	BEB 19-66-12
					QC 7 - 60	
					QC 7 - 9	
					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
					QC 7 - 40	
160 Powdercoat - 1 White Gl(A)- B4B M175459	6 pcs	5/15/19	0.00	0.36	Powdercoat - 1 - B4B	
					Powdercoat - 2 - B4B	
					Powdercoat - 3 - B4B	
					Powdercoat - 4 - B4B	
START: 1:25 ON T. 300° FINISH: 1:55						BK 19-6-12
170 QC 3	6 pcs	5/15/19	0.00	0.00	QC 3 - 10	
					QC 3 - 13	
					QC 3 - 15	
					QC 3 - 17	
					QC 3 - 18	
					QC 3 - 2	
					QC 3 - 28	
					QC 3 - 3	
					QC 3 - 30	
					QC 3 - 34	
					QC 3 - 36	
					QC 3 - 41	
					QC 3 - 51	
					QC 3 - 58	
					QC 3 - 59	SMB 19/6/12
					QC 3 - 68	

DAS 59 9-89

180 Small Fab - 2 - B4B	6 pcs	5/15/19	0.00	0.89	QC 3 - 9	
					QC 3 - 40	
					QC 3 - 19	
					Small Fab - 1 - B4B	DAS 58 9-89 JUN 12 2019
					Small Fab - 2 - B4B	
					Small Fab - 3 - B4B	
					Small Fab - 4 - B4B	
					Small Fab - 5 - B4B	
					Small Fab - 6 - B4B	
190 QC 5	6 pcs	5/15/19	0.00	0.00	Small Fab - 7 - B4B	
					QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	DAS 40 9-89 JUN 21 2019
200 Packaging 3-1 - Stock - B4B	6 pcs	5/15/19	0.00	0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	PC. ST 225
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	

					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
210 QC 21 - SA	6	5/15/19	0.00	0.00	QC 21 - SA - 21	
	pcs				QC 21 - SA - 70	
					QC 21 - SA - 53	

Part Op 100 - (Bandsaw) Cut blanks: 12.150" long
 Descriptions: 110 - (HAAS CNC Vertical Machine) 1- Mill as per Folio FA297 Rev: AA & Dwg D3179-1 Rev: E
 120 - (QC2- Inspect parts off machine FAI/FAIB)
 130 - (QC8- Inspect parts - second check)
 140 - (Chemical Conversion Coat per QSI005 4.1)
 150 - (QC7-Inspect Chemical Conversion Coat)
 160 - (White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum) START TIME: _____
 170 - (QC3- Inspect Part Finish)
 180 - (Small Fab) Assemble as per Dwg D3179
 190 - (QC5- Inspect part completeness to step on W/O)
 200 - (Identify as per dwg & Stock Location: _____)
 210 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6201	T Extrusion	6.0750 ft (1.0125 ea)	100-Bandsaw - 1	5173848 =
D2372 <u>GA119</u>	Quick Release	12 pcs (2 ea)	180-Small Fab - 2 - B4B	5108334 =
D2444 <u>GA127</u>	Pip Pin Assembly	6 pcs (1 ea)	180-Small Fab - 2 - B4B	5189101
MS21042L3 <u>ST303</u>	Nut	6 Ea (1 ea)	180-Small Fab - 2 - B4B	5164719
MS27039-1-13 <u>ST280</u>	Screw	6 Ea (1 ea)	180-Small Fab - 2 - B4B	5146712
NAS1149D0332J <u>ST204</u>	Washer	18 Ea (3 ea)	180-Small Fab - 2 - B4B	5071833
				5156763

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	D6201	6	12	0
180-Small Fab - 2 - B4B	D2372	12	5	0
	D2444	6	7	0
	MS21042L3	6	3,786	0
	MS27039-1-13	6	393	0
	NAS1149D0332J	18	3,628	0

Part Specifications

Specifications could not be found.

Plex 4/4/19 10:11 AM Dart.lajeunesse.marie

DART AEROSPACE LTD		Work Order: 192937
Description: Fwd Litter Tie Down Bracket		Part Number: D3179-1
Inspection Dwg: D3179	Rev: E	Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	+/-0.030	1.045	✓		Digital Gauge	
R0.40	+/-0.030	.40	✓		FLOS	
R0.38	+/-0.030	.375	✓		Red Gauge	
1.70	+/-0.030	1.692	✓		High Gauge	
Ø0.191	+0.005/-0.001	Ø.192	✓		Pin	
10.500	+/-0.010	10.501	✓		CNC 02	
4.250	+/-0.010	4.251	✓		FLOS	
Ø0.246	+0.005/-0.001	Ø.247	✓		Pin	
1.50	+/-0.030	1.501	✓		FLOS	
0.750	+/-0.010	.747	✓		FLOS	
1.000	+/-0.010	.996	✓		FLOS	
4.00	+/-0.030	4.000	✓		FLOS	
1.00	+/-0.030	.996	✓		FLOS	
1.38	+/-0.030	1.384	✓		High Gauge	
1.875	+/-0.010	1.873	✓		" "	
2.125	+/-0.010	2.123	✓		" "	
2.88	+/-0.030	2.889	✓		" "	
3.31	+/-0.030	3.310	✓		FLOS	
R0.375	+/-0.010	.375	✓		FLOS	
R0.50	+/-0.030	.50	✓		Red Gauge	
Ø0.191	+0.005/-0.001	Ø.192	✓		Pin	
R0.25	+/-0.030	.25	✓		Red Gauge	
R0.375	+/-0.010	.375	✓		FLOS	
R0.38	+/-0.030	.375	✓		Red Gauge	
12.00	+/-0.030	11.997	✓		CNC 02	
9.000	+/-0.010	8.998	✓		CNC 02	
7.50	+/-0.030	7.50	✓		FLOS	
4.50	+/-0.030	4.50	✓		"	
2.88	+/-0.030	2.877	✓		FLOS	
2.250	+/-0.010	2.248	✓		FLOS	
1.000	+/-0.010	.996	✓		FLOS	
0.50	DAS +/-0.030	.498	✓		FLOS	

Measured by: 71	Checked by: S.A	QC Inspector:
Date: 19-6-11	Date: 19-06-11	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	09.04.05	New Issue P/O D3179-041	KJ/DD	
B	12.10.04	Dimension 0.750 was 1.750	KJ	
C	13.05.27	Dimensions revised per Dwg Rev D	KJ	
D	16.06.08	Dimensions revised per Dwg Rev E	KJ	
E	17.02.16	Dimensions rearranged	KJ	

Entered: _____ Date: _____

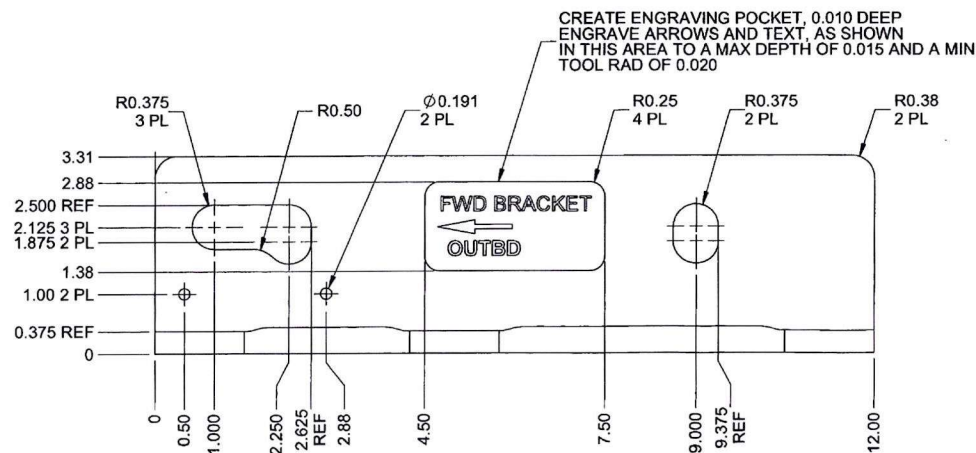
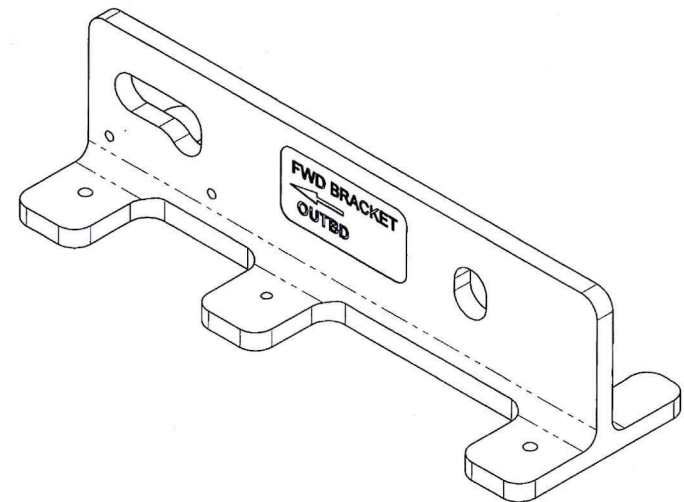
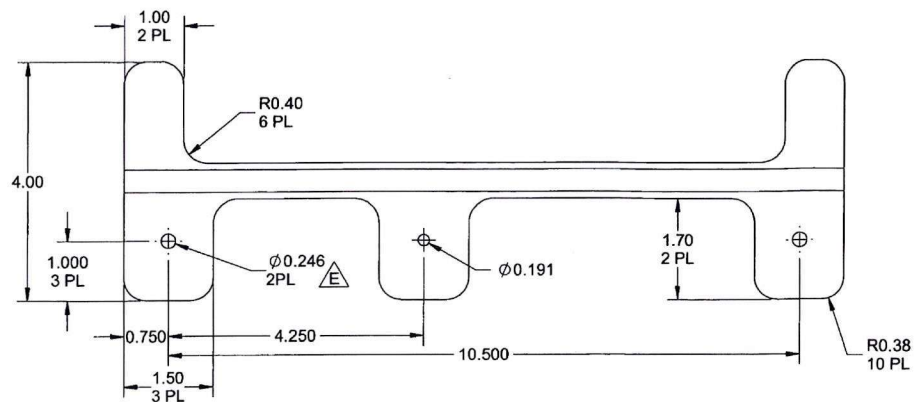


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: <u>192937</u> Part No. <u>D3179-041</u>	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☒	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☒ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐		
Date : <u>19/6/6</u>	Sequence #:	QTY Affected : <u>1</u>	MRB (QSI042) INSP 12 <u>19/6/6</u>	
Description Work Order Deviation		Disposition		
<u>Text engraving is $\approx$ 0.030 deep.</u>		<u>Acceptable. Not high stress region of part.</u>		
		Completed By <u>19/6/6</u> Lead hand / Supervisor <u>19-06-06</u>		
		QC / QA Coordinator <u>DAS</u> <u>68</u> <u>9-89</u> <u>JUN 06 2019</u>		
Root Cause Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐	FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☒ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:				



CREATE ENGRAVING POCKET, 0.010 DEEP
ENGRAVE ARROWS AND TEXT, AS SHOWN
IN THIS AREA TO A MAX DEPTH OF 0.015 AND A MIN
TOOL RAD OF 0.020

D3179-1 TIE DOWN BRACKET

NOTES:

- 1) MATERIAL: MAKE FROM D6201-012 EXTRUSION (6061-T6/T6511 PER QQ-A-200/8)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.90 lbs

RELEASED
2016-04-18

APPROVED

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	MB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AJS	DRAWING NO.	REV. E
MFG. APPR.	JLM	D3179	SHEET 2 OF 2
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	LITTER TIE DOWN BRACKET	NTS
DATE	15.11.12	COPYRIGHT © 1995 BY DART AEROSPACE LTD	
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